

5.4 Math Lab: Graphing Data

FOCUS Graph data and investigate the domain and range when the data represent a function.

1. Would you join the points on a graph that represents each relation below? Circle your choice.

- a) the relation between the mass and age of a baby
- b) the relation between the number of ice cream cones sold and the outside temperature
- c) the relation between the volume of gas in a car and the distance travelled
- d) the relation between the outside temperature and the time of day
- e) the relation between the number of T-shirts sold and the profit

Can you have a fraction of each item in the relation?

Yes

No

Yes

No

Yes

No

Yes

No

Yes

No

2. This table shows the number of cars in a school parking lot during a day.

a) Graph the data.

Time	Number of cars
7 A.M.	0
8 A.M.	20
9 A.M.	35
10 A.M.	35
11 A.M.	35
12 noon	10
1 P.M.	25
2 P.M.	30
3 P.M.	30
4 P.M.	5

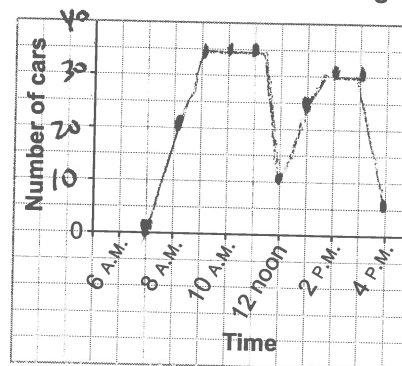
Choose a scale for the vertical axis.

The greatest number of cars is 35.

So, let 1 square = 5 cars

Plot the points: (7, 0), (8, 20), and so on

Number of Cars in School Parking Lot



b) Does it make sense to join the points? Explain.

maybe? # of cars can change in between times.

c) Is the relation a function? Explain.

Yes. for every time, there is only one number of cars

d) What is the domain?

{7 A.M., 8 A.M., 9 A.M., 10 A.M., 11 A.M., 12 noon, 1 P.M., 2 P.M., 3 P.M., 4 P.M.}

What is the range?

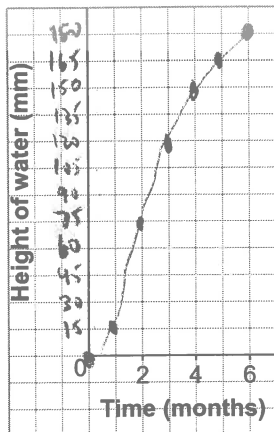
{0, 5, 10, 20, 25, 30, 35}

3. This table shows the height of water in a rain barrel over time.

a) Graph the data.

Time (months)	Height of water (mm)
0	0
1	15
2	75
3	120
4	150
5	165
6	180

Height of Water in a Rain Barrel



b) Does it make sense to join the points? Explain.

Yes. The rain barrel fills in between given date points. Fills during month.

c) Is the relation a function? Explain.

Yes. For every time there is only 1 height.

4. For each table of values below:

i) Graph the data. Will you join the points? Justify your answer.

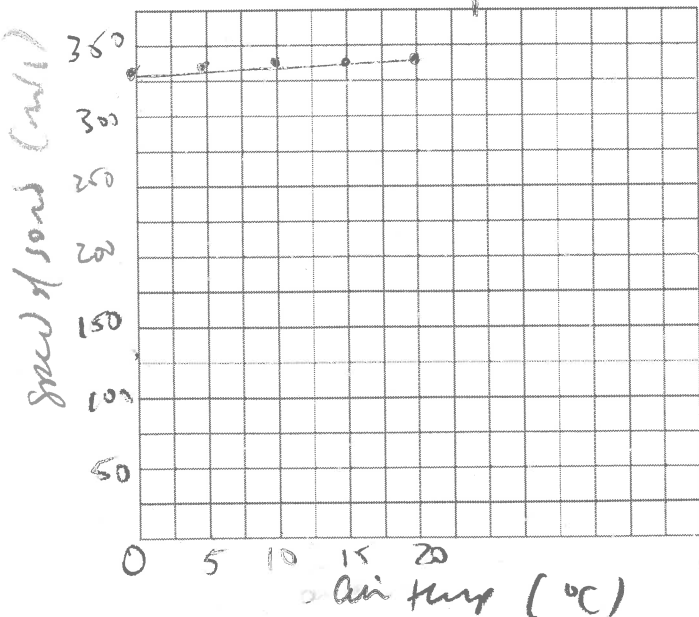
ii) Does the graph represent a function? Explain.

a) At a constant pressure, the speed of sound in air is related to the air temperature.

Air Temperature (°C)	Speed of Sound (m/s)
0	331
5	334
10	337
15	340
20	343

Join - temp + speed exist begin given points

speed of sound vs air temperature



b) The recommended daily dose of vitamin C is related to a female's age in years.

Age (years)	Dose of Vitamin C Tablet (mg)
3	15
6	25
9	45
12	45
15	65
18	65
21	75

Second element (dep variable).

No. It's probably an age range age 3-5, age 6-8 etc. Doesn't necessarily go up by yr.

